

S/N 10/033,634

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: NELSON ET AL. Examiner: K. ROWAN
Serial No.: 10/033,634 Group Art Unit: 3643
Filed: DECEMBER 27, 2001 Docket No.: 163.1118USD1
Title: FLY TRAP WITH MULTIPLE LIGHT PATTERNS

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By: *Teresa Anderson*
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APPELLANT'S BRIEF ON APPEAL

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

23552

PATENT TRADEMARK OFFICE

Sir:

This Brief is presented in support of the Appeal filed January 15, 2004, from the final rejection of the above-identified application, as set forth in the Office Action mailed July 16, 2003.

A check for \$330.00 to cover the required fee for filing this Brief is enclosed. An original and two copies of the Brief are enclosed herewith.

An oral hearing is requested. The fee of \$290.00 for the cost of an oral hearing as set forth in 37 C.F.R. §117(d) will be submitted within two months of the Examiner's Answer.

05/18/2004 AWONDAF1 00000038 10033634

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I. REAL PARTY OF INTEREST

The real party of interest is Ecolab Inc. of St. Paul, Minnesota by way of an assignment

recorded on June 17, 1996 at Reel 7974, Frame 0653.

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II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the above-referenced patent application.

III. STATUS OF CLAIMS

Claims 1-18, 20, 21, 23-33, 36-46, 48, 50-71 and 73-79 are pending. Claims 6, 7, 21, 59, 60 and 74 are withdrawn. Claims 1-5, 8-18, 20, 23-27, 29-33, 36-46, 48, 50-58, 61-71 and 75-79 are rejected and are the subject of this Appeal (Appendix 1, The Claims on Appeal). Claim 28 is allowed. All pending claims are listed in Appendix 2.

IV. STATUS OF AMENDMENTS

No amendments were filed after the final Office Action was mailed on July 16, 2003.

V. SUMMARY OF THE INVENTION

The invention is a trap for flying insects, such as flies, that uses insect attractive light displayed on a mounting surface. In contrast to prior traps that describe using light emission or a single light pattern of ultraviolet light to attract flying insects, the claimed invention specifies three or more insect attracting light patterns formed on the planar mounting surface.

Three independent claims are the subject of this Appeal: 1, 29 and 55. Each of the three independent claims includes a means for mounting the flying insect trap on the planar mounting surface, at least one source of insect attractant light, at least one insect immobilization surface, and a housing configured to cooperate with the source of insect attractant light such that light from source is directed into the at least three insect attracting light patterns formed on the planar mounting surface.

Independent claim 1 further specifies that the at least three insect attracting light patterns are non-overlapping.

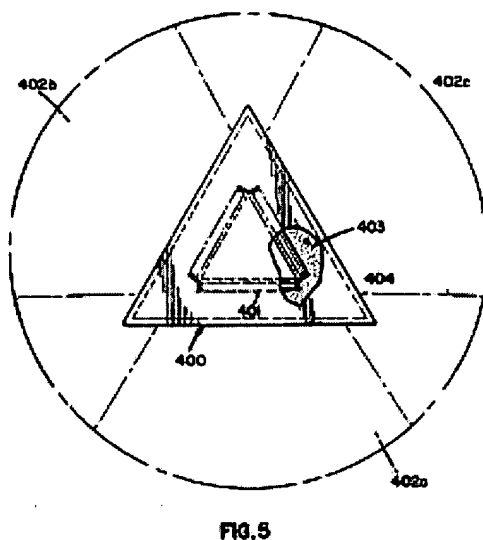
Independent claim 29 specifies that the housing includes a triangular planar plate.

Independent claim 55 specifies that the flying insect trap includes at least three sources of insect attractant light and that the housing includes three sides, where one of the light sources is positioned near each side and one of the three patterns is formed near each of the three sides of the housing.

U.S. Patent Nos. 5,365,690 and 5,505,017 discuss the advantages of using a light pattern on a mounting surface to attract flying insects to an insect trap. The present application claims priority to these patents as a continuation in part and these patents are assigned to the owner of the present application, Ecolab Inc. The current patent application elaborates on the advantages of multiple light patterns formed near an insect trap. As discussed in the experimental section of the patent application at pages 18-19, a trap arrangement with multiple light patterns is surprisingly effective in fly capture rates when compared to a control trap with one light pattern.

One example of a flying insect trap according to the claims is shown in Illustration A below, which is Figure 5 of the present patent application. The trap 400 includes a triangular planar plate and a source of insect attractant light 401. The light 401 and the trap housing 404 cooperate to form three light patterns 402A, 402B and 402C.

Illustration A: Figure 5 from Application



VI. ISSUES PRESENTED FOR REVIEW

The pending claims were all rejected under 35 U.S.C. §103(a) over U.S. Patent 4,949,501 to Larkin (hereinafter "Larkin") without a second reference being applied. In making the rejection, the Examiner referenced Figure 4 of Larkin in the Office Action, which is reproduced below as Illustration B on page 6. The three issues for review correspond to the three independent claims: 1, 29 and 55.

1. Whether Larkin teaches or it is obvious to modify Larkin to be an insect trap that forms three non-overlapping insect attracting light patterns on a mounting surface instead of a

single continuous light pattern, so that independent claim 1 and dependent claims 2-5, 8-18, 20, and 23-27 are unpatentable under 35 U.S.C. §103 over Larkin.

2. Whether it is obvious to modify Larkin, which shows one continuous light pattern and a rectangular plate, to have three insect attracting light patterns and a triangular planar plate, so that independent claim 29 and dependent claims 30-33, 36-46, 48, and 50-54 are unpatentable under 35 U.S.C. §103 over Larkin.

3. Whether it is obvious to modify Larkin to have at least three sources of insect attractant light where each source of light is arranged near one side of the housing, so that one pattern is formed on each of three sides of the housing, so that independent claim 55 and dependent claims 56-58, 61-71 and 75-79 are unpatentable under 35 U.S.C. §103 over Larkin.

VII. GROUPING OF CLAIMS

The claims do not stand and fall together. The three independent claims under appeal, claims 1, 29 and 55, each have different characteristics that distinguish them from the cited prior art. In addition, many of the dependent claims include characteristics that distinguish them from the cited prior art. However, for the purposes of simplifying the issues on Appeal, the Applicant will make arguments related only to the independent claim features.

Accordingly, independent claim 1 and dependent claims 2-5, 8-18, 20, and 23-27 are grouped together for purposes of this Appeal. Independent claim 29 and dependent claims 30-33, 36-46, 48, and 50-54 are grouped together for purposes of this Appeal. Independent claim 55 and dependent claims 56-58, 61-71 and 75-79 are grouped together for the purpose of this Appeal.

VIII. ARGUMENT

A. Summary of the Examiner's rationale for rejection.

All pending claims were rejected under 35 U.S.C. §103 as being unpatentable over Larkin. No second reference was combined with Larkin in making this rejection.

Each of the independent claims specifies a trap that forms at least three insect attracting light patterns on a mounting surface. The Examiner asserted in the Office Action that this feature is shown in Figure 4 of Larkin, stating that Larkin shows "three insect attracting light patterns separated by about 120 degrees formed on the planar mounting surface such as shown in Figure 4". Final Office Action, page 2, last sentence. Figure 4 from Larkin is reproduced below as Illustration B.

Illustration B: Figure 4 from Larkin

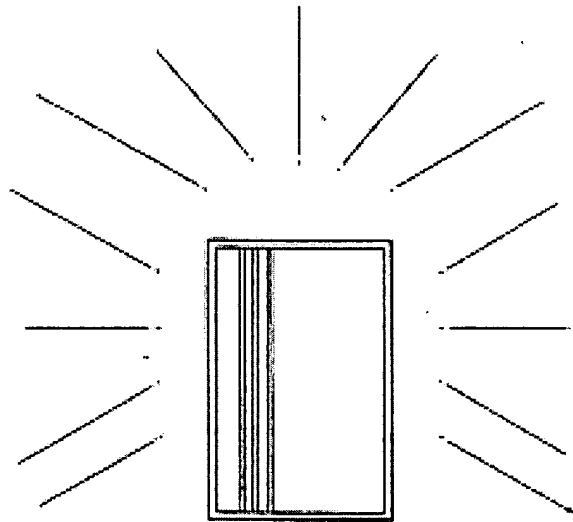


FIG. 4

As seen above, Figure 4 of Larkin shows light rays emanating from the trap. The Examiner did not describe how these light rays teach three insect attracting light patterns separated by about 120 degrees formed on the planar mounting surface.

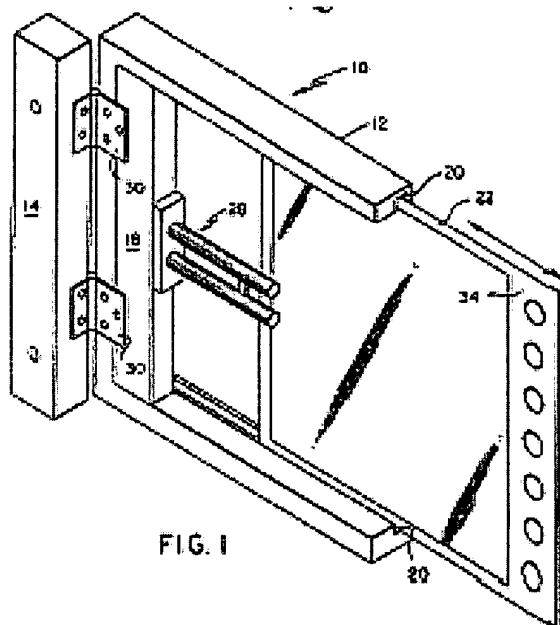
Claim 1 states that the three light patterns are non-overlapping. Regarding this feature, the Examiner states, "Larkin shows light patterns in Fig. 4, but it is not clear if they overlap or not? At any rate, it would have been obvious to provide non-overlapping light patterns since the function is the same and no stated problem is solved." Final Office Action, page 3, lines 1-4. The Examiner does not point out where non-overlapping light patterns are taught in Larkin or any other prior art and does not articulate any motivation for modifying Larkin to include non-overlapping light patterns.

Claim 29 specifies that the trap includes a triangular planar plate. Regarding this feature, the Examiner states, "Larkin shows a rectangular housing with a rectangular plate, but it would have been obvious to employ other shapes for the housing and plate such as triangular since the function is the same and no stated problem is solved. Also, see in re Dailey et al., 149 USPQ 47." Final Office Action, page 4, last two sentences. The Examiner did not describe where in the prior art a triangular planar plate is found and did not describe any motivation for modifying the trap of Larkin to have a triangular planar plate.

Claim 55 specifies that the trap includes at least three sources of insect attractant light and that each source is positioned near one of three sides of the housing. Claim 55 further specifies that a light pattern is formed on each of the three sides of the housing. In the Office Action, the Examiner states, "Larkin discloses two light sources referred to as #28, but it would have been obvious to employ three lights for multiplied effect with each source creating a separate light pattern. See in re Harza, 124 USPQ 378." Final Office Action, page 4, lines 3-7.

Figure 1 from Larkin is reproduced below as Illustration C, including one U-shaped fluorescent light 28 mounted on a base panel 18. (Larkin, Col. 2, Lines 32-35).

Illustration C: Figure 1 from Larkin



No second reference was cited as teaching three sources of insect attractant light or one source positioned near each of three sides to form one pattern each.

B. Requirements for a rejection under 35 U.S.C. §103.

In a rejection under 35 U.S.C. §103(a), the Examiner must provide a prima facie case of obviousness, which has four parts:

- a. There must be some suggestion or motivation to combine the prior art.
- b. There must be a reasonable expectation of success of the combination.
- c. The prior art references, when combined, must teach or suggest all claim limitations.

d. Both the teaching or suggestion to make the combination and the reasonable expectation of success must be found in the prior art, and not in the applicant's disclosure.

MPEP 2142. In re Vaeck, 947 F.2d 488, 493 (Fed. Cir. 1991).

The Examiner can satisfy the burden of showing the obviousness of the combination only by locating some objective teaching in the prior art that would lead one to combine the relevant teachings of the references. In re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected the components for the combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1359 (Fed. Cir. 1998) (emphasis added).

C. Claim 1 is patentable because a trap with three non-overlapping light patterns is not obvious in view of Larkin.

Claim 1 relates to a flying insect trap including at least one source of insect attractant light and a housing, where the housing is configured to cooperate with the source of insect attractant light such that light from the source is directed into at least three non-overlapping insect attracting light patterns formed on a planar mounting surface. In rejecting this claim the Examiner asserted that Larkin teaches three light patterns in Figure 4 of Larkin. The Examiner also asserts that it would have been obvious to provide non-overlapping light patterns since the function is the same and no stated problem is solved.

Applicants respectfully traverse this rejection and request reversal of this ground for rejection. The Examiner has failed to provide a prima facie case of obviousness. First, the Examiner has failed to provide prior art references that, when combined, teach or suggest all

claim limitations. Fig. 4 of Larkin shows a single continuous light pattern, and does not show three non-overlapping light patterns. Fig. 4 of Larkin does not even show three light patterns.

Fig. 1 from Larkin, Illustration C, shows that Larkin does not have any structure or bulb arrangement that would create three light patterns on the mounting surface. The base 14 is the only structure that comes between the light source 28 and the mounting surface. Due to the base 14, the light rays of Fig. 1 of Larkin do not emanate from the bottom of the trap. The trap of Larkin does not include any other structures to interrupt the continuous light pattern shown in Fig. 1 of Larkin. No other references are provided in the Office Action to teach this claim limitation.

In rejecting claims under 35 U.S.C. §103, the examiner bears the burden of establishing that the prior art references teach or suggest all claim limitations. MPEP 2143.03. All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385; 165 USPQ 494, 496 (CCPA 1970). This burden has not been met because the Office Action does not establish that Larkin teaches the claim limitation of three non-overlapping light patterns. Light patterns each have a visible footprint on a surface defining the substantially brightest part of the pattern, and for nonoverlapping light patterns, no part of one footprint covers any part of another footprint. Instead of teaching three nonoverlapping light patterns, Larkin simply teaches one light pattern and the Larkin trap has no structure that would cause separate footprints of visible light within that light pattern.

Also, there is no suggestion or motivation provided to modify the Larkin reference. To allege that it is obvious to modify Larkin to have three non-overlapping light patterns, then the Board must identify this teaching in the prior art and explain the reasons why one of ordinary skill in the art would have been motivated to select the references and combine them. In re Lee,

61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). The factual question of motivation is material to patentability and cannot be resolved on subjective belief and unknown authority. Id. at 1435. The need for specificity pervades this authority and teachings of references can be combined only if there is some suggestion or incentive to do so. Id. at 1433. Common knowledge and common sense, even if assumed to derive from the agency's expertise, do not substitute for the authority required by the Administrative Procedure Act. Id. at 1435.

The rejection of claim 1 and its dependent claims should be reversed because a prima facie case of obviousness has not been established. The feature of three non-overlapping light patterns formed on a mounting surface is not present in the cited prior art. In addition, no motivation is articulated for modifying Larkin to include this feature.

D. Claim 29 is patentable because a trap with three light patterns and a triangular planar plate is not obvious in view of Larkin.

Claim 29 relates to a flying insect trap including a housing configured to cooperate with a source of insect attractant light such that light from the source is directed into at least three insect attracting light patterns formed on a planar mounting surface. The housing of claim 29 includes a triangular planar plate.

In rejecting this claim, the Examiner stated that although Larkin showed a rectangular planar plate, it would have been obvious to use other shapes for the housing such as a triangular plate, since the function is the same and no stated problem is solved. Final Office Action, page 4, last two sentences. This rejection does not provide a prima facie case of obviousness. First, the rejection does not provide prior art references that teach or suggest all claim limitations. No prior art reference is provided that teaches the claim limitation of a triangular planar plate.

A second flaw with the rejection is that it does not provide any suggestion or motivation to modify the Larkin reference. There is no discussion of why one of ordinary skill in the art would be motivated to change the rectangular configuration of Larkin to include a triangular planar plate.

The Examiner must find a specific motivation in the prior art to combine references used in a rejection under 35 U.S.C. §103, even where the features have an aesthetic advantage. In re Dembiczak, 175 F.3d 994; 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). In Dembiczak, the appellants' claims in their patent application were directed toward a large trash bag made of orange plastic that when filled with trash or leaves would resemble a Halloween-style pumpkin or jack-o'-lantern. The claims specified "facial indicia" on the outer surface of the bag. Id. at 995; 1615. Among the references cited by the examiner in an obviousness rejection under 35 U.S.C. §103 were "conventional" plastic lawn bags and a children's book describing a method of making a "paper bag pumpkin" by stuffing a bag with newspapers, painting it orange, and then painting on facial features with black paint.

The Patent Appeals Board sustained and rejected all pending claims. The Board stated that "the only difference between the invention presently defined in the independent claims on appeal and the orange plastic trash bags of the prior art resides in the application of the facial indicia to the outer surface of the bag." Id. at 998; 1617. Appellants challenged the Board decision in the federal courts. The Federal Circuit reversed the obviousness rejections and found no evidence in the record of a suggestion, teaching or motivation to combine the prior art references asserted against the pending claims. The Federal Circuit emphasized that obviousness rejections require a clear and particular showing of the teaching or motivation to combine prior

art references, which most often comes from the teachings of the pertinent references, and must be supported by actual evidence. Id. at 999; 1618.

The Federal Circuit also stated that close adherence to the methodology for analyzing 103 rejections is "especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'" Id. at 999; 1617, quoting W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983).

In the present patent application, the Examiner has not presented objective teaching from the prior art that would lead one to modify Larkin. The Examiner must submit particular findings as to why a skilled artisan, with no knowledge of the claimed invention, would have selected the claimed components for combination.

In the rejection, the Examiner cited In re Dailey and Eilers, 149 USPQ 47 (CCPA 1966), for the proposition that it would have been obvious to employ other shapes for the housing such as a triangular shape since the function is the same and no stated problem is solved. The MPEP 2144.04 states that Dailey held that the configuration of a claimed disposable plastic nursing container was a matter of choice, which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.

In contrast to the Daily case, the claimed feature of a triangular plate is significant to the invention of claim 29 because it facilitates the formation of three light patterns. The significance of multiple light patterns is discussed in the specification. The experimental section on pages 18-19 of the specification describes the experiments that were performed and the conclusion that a

trap with multiple light patterns is surprisingly more effective than a control trap with a single light pattern. Accordingly, in this case, the claimed feature of a triangular planar plate in claim 29 is significant to the function of the invention. Therefore, this application differs from the situation in Dailey.

The rejection of claim 29 and its dependent claims should be withdrawn because no cited prior art reference teaches a triangular plate and no motivation has been set forth for modifying Larkin to include a triangular plate.

E. Claim 55 is patentable because a trap with three light sources where one light source is positioned near each of three sides is not obvious in view of Larkin.

Claim 55 relates to a flying insect trap including at least three sources of insect attractant light. Claim 55 further specifies a housing directing light into at least three insect attracting light patterns. Claim 55 goes on to state that the housing includes three sides and one of the light sources is positioned near each side. Claim 55 also specifies that one of each of the three patterns is formed on one of each of the three sides of the housing.

The Office Action states that it would have been obvious to employ three lights for multiplied effect with each source creating a separate light pattern. Final Office Action, page 4, lines 3-7. However, the rejection does not provide a prima facie case of obviousness. First, there is no discussion of a prior art reference that teaches three light sources arranged as specified in claim 55.

Second, the motivation articulated for modifying Larkin does not provide motivation to arrive at all of the claim limitations not found in Larkin. As motivation for modifying Larkin, the Examiner states that it would have been obvious to employ three lights for multiplied effect.

This motivation does not specify why three light sources would be arranged so that one light source is positioned near each of the three sides.

In Figure 1 of Larkin, reproduced on page 8 as Illustration C, a single U-shaped fluorescent light 28 is positioned in the middle of the trap. Larkin, Col. 2, lines 32-35. The light 28 is not near any one of the sides. The motivation of obtaining a "multiplied effect" does not explain repositioning the light source 28 of Larkin and then adding second and third light sources in other positions near other sides.

F. Conclusion.

In conclusion, the pending rejections over Larkin should be withdrawn because the final Office Action did not provide a prima facie case of obviousness with respect to any of the three independent claims.

Accordingly, the rejection should be reversed, and all of the pending claims should be allowed.

IX. DISPOSITION OF NON-ELECTED CLAIMS

In response to the restriction requirement mailed March 25, 2003, claims 6, 7, 21, 59, 60 and 74 were withdrawn from consideration. These withdrawn claims are included in the listing of pending claims shown in Appendix 2. These withdrawn claims relate to a trap that forms four light patterns or whose housing includes four openings. Applicants respectfully submit that the pending independent claims upon which these withdrawn claims depend, claims 1 and 55, are allowable and are generic to a trap with either three or four openings that forms three or four light patterns.

Accordingly, Applicants respectfully request that these withdrawn claims be rejoined with the pending claims and allowed.

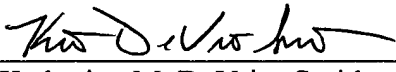
SUMMARY

It is earnestly requested that the Examiner's rejection be reversed, and that all of the pending claims be allowed.

Respectfully submitted,

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APPENDIX 1

THE CLAIMS ON APPEAL (as finally amended)

1-5, 8-18, 20, 23-27, 29-33, 36-46, 48, 50-58, 61-71, 73 and 75-79

1. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:
 - (a) means for mounting the flying insect trap on the planar mounting surface;
 - (b) at least one source of insect attractant light;
 - (c) at least one insect immobilization surface; and
 - (d) a housing, the housing configured to cooperate with the source of insect attractant light such that light from the source is directed into at least three non-overlapping insect attracting light patterns formed on the planar mounting surface.
2. The trap of claim 1 wherein the housing comprises three sides and one of each of the three patterns is formed on one of each of the three sides of the housing.
3. The trap of claim 1 wherein each light pattern comprises radiated light.
4. The trap of claim 1 wherein each light pattern comprises both reflected and radiated light.
5. The trap of claim 1 wherein the three insect attracting light patterns are separated by about 120 degrees.
8. The trap of claim 1 wherein the source of insect attractant light comprises at least one source of ultraviolet light.
9. The trap of claim 1 wherein the insect immobilization surface comprises an adhesive surface.

10. The trap of claim 9 wherein the adhesive surface is mounted on the planar mounting surface.
11. The trap of claim 9 wherein the adhesive surface is mounted on a portion of the housing.
12. The trap of claim 1 wherein the planar mounting surface comprises a wall surface.
13. The trap of claim 1 wherein the planar mounting surface comprises a ceiling surface.
14. The trap of claim 1 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
15. The trap of claim 14 wherein the reflecting surface is a planar reflecting surface.
16. The trap of claim 14 wherein the reflecting surface is a curved reflecting surface.
17. The trap of claim 1 wherein the trap further comprises an insect attractant composition.
18. The trap of claim 1 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
20. The trap of claim 1 wherein the housing comprises three openings.
23. The trap of claim 1 wherein the trap shape is a regular geometric pattern.
24. The trap of claim 1 further including three light sources, each light source creating a separate light pattern.
25. The trap of claim 24 wherein at least one of the three light sources is an ultraviolet bulb.

26. The trap of claim 24 wherein the three light sources are ultraviolet bulbs having a tubular configuration.

27. The trap of claim 1 wherein the housing includes a triangular planar plate.

29. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:

(a) means for mounting the flying insect trap on the planar mounting surface;

(b) at least one source of insect attractant light;

(c) at least one insect immobilization surface; and

(d) a housing, the housing configured to cooperate with the source of insect attractant light such that light from the source is directed into at least three insect attracting light patterns formed on the planar mounting surface, wherein the housing includes a triangular planar plate.

30. The trap of claim 29 wherein the housing comprises three sides and one of each of the three patterns is formed on one of each of the three sides of the housing.

31. The trap of claim 29 wherein each light pattern comprises radiated light.

32. The trap of claim 29 wherein each light pattern comprises both reflected and radiated light.

33. The trap of claim 29 wherein the three insect attracting light patterns are separated by about 120 degrees.

34. The trap of claim 29 wherein the housing is configured to cooperate with the source of insect attractant light such that light from the source is directed into four insect attracting light patterns formed on the planar mounting surface.

36. The trap of claim 29 wherein the source of insect attractant light comprises at least one source of ultraviolet light.
37. The trap of claim 29 wherein the insect immobilization surface comprises an adhesive surface.
38. The trap of claim 37 wherein the adhesive surface is mounted on the planar mounting surface.
39. The trap of claim 37 wherein the adhesive surface is mounted on a portion of the housing.
40. The trap of claim 29 wherein the planar mounting surface comprises a wall surface.
41. The trap of claim 29 wherein the planar mounting surface comprises a ceiling surface.
42. The trap of claim 29 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
43. The trap of claim 42 wherein the reflecting surface is a planar reflecting surface.
44. The trap of claim 42 wherein the reflecting surface is a curved reflecting surface.
45. The trap of claim 29 wherein the trap further comprises an insect attractant composition.
46. The trap of claim 29 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
48. The trap of claim 29 wherein the housing comprises three openings.
50. The trap of claim 29 wherein the light patterns are non-overlapping.

51. The trap of claim 29 wherein the trap shape is a regular geometric pattern.
52. The trap of claim 29 further including three light sources, each light source creating a separate light pattern.
53. The trap of claim 52 wherein at least one of the three light sources is an ultraviolet bulb.
54. The trap of claim 52 wherein the three light sources are ultraviolet bulbs having a tubular configuration.
55. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:
- (a) means for mounting the flying insect trap on the planar mounting surface;
 - (b) at least three sources of insect attractant light;
 - (c) at least one insect immobilization surface; and
 - (d) a housing, the housing configured to cooperate with the sources of insect attractant light such that light from the source is directed into at least three insect attracting light patterns formed on the planar mounting surface, wherein the housing includes three sides, one of the light sources is positioned near each side, and one of each of the three patterns is formed on one of each of the three sides of the housing.
56. The trap of claim 55 wherein each light pattern comprises radiated light.
57. The trap of claim 55 wherein each light pattern comprises both reflected and radiated light.
58. The trap of claim 55 wherein the three insect attracting light patterns are separated by about 120 degrees.

61. The trap of claim 55 wherein the source of insect attractant light comprises at least one source of ultraviolet light.
62. The trap of claim 55 wherein the insect immobilization surface comprises an adhesive surface.
63. The trap of claim 62 wherein the adhesive surface is mounted on the planar mounting surface.
64. The trap of claim 62 wherein the adhesive surface is mounted on a portion of the housing.
65. The trap of claim 55 wherein the planar mounting surface comprises a wall surface.
66. The trap of claim 55 wherein the planar mounting surface comprises a ceiling surface.
67. The trap of claim 55 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
68. The trap of claim 67 wherein the reflecting surface is a planar reflecting surface.
69. The trap of claim 67 wherein the reflecting surface is a curved reflecting surface.
70. The trap of claim 55 wherein the trap further comprises an insect attractant composition.
71. The trap of claim 55 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
73. The trap of claim 55 wherein the housing comprises three openings.
75. The trap of claim 55 wherein the light patterns are non-overlapping.

76. The trap of claim 55 wherein the trap shape is a regular geometric pattern.
77. The trap of claim 55 wherein at least one of the three light sources is an ultraviolet bulb.
78. The trap of claim 55 wherein the three light sources are ultraviolet bulbs having a tubular configuration.
79. The trap of claim 55 wherein the housing includes a triangular planar plate.

APPENDIX 2

Pending Claims 1-18, 20, 21, 23-33, 36-46, 48, 50-71 and 73-79, Including Withdrawn

Claims 6, 7, 21, 59, 60 and 74

1. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:
 - (a) means for mounting the flying insect trap on the planar mounting surface;
 - (b) at least one source of insect attractant light;
 - (c) at least one insect immobilization surface; and
 - (d) a housing, the housing configured to cooperate with the source of insect attractant light such that light from the source is directed into at least three non-overlapping insect attracting light patterns formed on the planar mounting surface.
2. The trap of claim 1 wherein the housing comprises three sides and one of each of the three patterns is formed on one of each of the three sides of the housing.
3. The trap of claim 1 wherein each light pattern comprises radiated light.
4. The trap of claim 1 wherein each light pattern comprises both reflected and radiated light.
5. The trap of claim 1 wherein the three insect attracting light patterns are separated by about 120 degrees.
6. (Withdrawn) The trap of claim 1 wherein the housing is configured to cooperate with the source of insect attractant light such that light from the source is directed into four insect attracting light patterns formed on the planar mounting surface.
7. (Withdrawn) The trap of claim 6 wherein the four insect attracting light patterns are separated by about 90 degrees.

8. The trap of claim 1 wherein the source of insect attractant light comprises at least one source of ultraviolet light.
9. The trap of claim 1 wherein the insect immobilization surface comprises an adhesive surface.
10. The trap of claim 9 wherein the adhesive surface is mounted on the planar mounting surface.
11. The trap of claim 9 wherein the adhesive surface is mounted on a portion of the housing.
12. The trap of claim 1 wherein the planar mounting surface comprises a wall surface.
13. The trap of claim 1 wherein the planar mounting surface comprises a ceiling surface.
14. The trap of claim 1 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
15. The trap of claim 14 wherein the reflecting surface is a planar reflecting surface.
16. The trap of claim 14 wherein the reflecting surface is a curved reflecting surface.
17. The trap of claim 1 wherein the trap further comprises an insect attractant composition.
18. The trap of claim 1 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
20. The trap of claim 1 wherein the housing comprises three openings.
21. (Withdrawn) The trap of claim 1 wherein the housing comprises four openings.

23. The trap of claim 1 wherein the trap shape is a regular geometric pattern.
24. The trap of claim 1 further including three light sources, each light source creating a separate light pattern.
25. The trap of claim 24 wherein at least one of the three light sources is an ultraviolet bulb.
26. The trap of claim 24 wherein the three light sources are ultraviolet bulbs having a tubular configuration.
27. The trap of claim 1 wherein the housing includes a triangular planar plate.
28. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:
 - (a) means for mounting the flying insect trap on the mounting surface;
 - (b) at least three sources of insect attractant light, including:
 - (i) a first source;
 - (ii) a second source; and
 - (iii) a third source;
 - (c) at least one insect immobilization surface;
 - (d) a housing having a triangular configuration, the housing comprising at least three side openings, including:
 - (i) a first side opening located on a first side of the housing;
 - (ii) a second side opening located on a second side of the housing;
 - (iii) a third side opening located on a third side of the housing; and
 - (e) the first, second, and third side openings configured to partially enclose the first, second, and third sources of insect attractant light and cooperate with the sources of insect attractant light such that light from the sources is directed onto the planar mounting surface to form at least three non-overlapping insect attracting light patterns, including:
 - (i) a first light pattern;

- (ii) a second light pattern spaced 120 degrees from the first light pattern; and
- (iii) a third light pattern spaced 120 degrees from the second light pattern.

29. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:

- (a) means for mounting the flying insect trap on the planar mounting surface;
- (b) at least one source of insect attractant light;
- (c) at least one insect immobilization surface; and
- (d) a housing, the housing configured to cooperate with the source of insect attractant light such that light from the source is directed into at least three insect attracting light patterns formed on the planar mounting surface, wherein the housing includes a triangular planar plate.

30. The trap of claim 29 wherein the housing comprises three sides and one of each of the three patterns is formed on one of each of the three sides of the housing.

31. The trap of claim 29 wherein each light pattern comprises radiated light.

32. The trap of claim 29 wherein each light pattern comprises both reflected and radiated light.

33. The trap of claim 29 wherein the three insect attracting light patterns are separated by about 120 degrees.

36. The trap of claim 29 wherein the source of insect attractant light comprises at least one source of ultraviolet light.

37. The trap of claim 29 wherein the insect immobilization surface comprises an adhesive surface.

38. The trap of claim 37 wherein the adhesive surface is mounted on the planar mounting surface.
39. The trap of claim 37 wherein the adhesive surface is mounted on a portion of the housing.
40. The trap of claim 29 wherein the planar mounting surface comprises a wall surface.
41. The trap of claim 29 wherein the planar mounting surface comprises a ceiling surface.
42. The trap of claim 29 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
43. The trap of claim 42 wherein the reflecting surface is a planar reflecting surface.
44. The trap of claim 42 wherein the reflecting surface is a curved reflecting surface.
45. The trap of claim 29 wherein the trap further comprises an insect attractant composition.
46. The trap of claim 29 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
48. The trap of claim 29 wherein the housing comprises three openings.
50. The trap of claim 29 wherein the light patterns are non-overlapping.
51. The trap of claim 29 wherein the trap shape is a regular geometric pattern.
52. The trap of claim 29 further including three light sources, each light source creating a separate light pattern.

53. The trap of claim 52 wherein at least one of the three light sources is an ultraviolet bulb.
54. The trap of claim 52 wherein the three light sources are ultraviolet bulbs having a tubular configuration.
55. A flying insect trap, using insect attractant light displayed onto a substantially planar mounting surface, said trap comprising:
- (a) means for mounting the flying insect trap on the planar mounting surface;
 - (b) at least three sources of insect attractant light;
 - (c) at least one insect immobilization surface; and
 - (d) a housing, the housing configured to cooperate with the sources of insect attractant light such that light from the source is directed into at least three insect attracting light patterns formed on the planar mounting surface, wherein the housing includes three sides, one of the light sources is positioned near each side, and one of each of the three patterns is formed on one of each of the three sides of the housing.
56. The trap of claim 55 wherein each light pattern comprises radiated light.
57. The trap of claim 55 wherein each light pattern comprises both reflected and radiated light.
58. The trap of claim 55 wherein the three insect attracting light patterns are separated by about 120 degrees.
59. (Withdrawn) The trap of claim 55 wherein the housing is configured to cooperate with the source of insect attractant light such that light from the source is directed into four insect attracting light patterns formed on the planar mounting surface.
60. (Withdrawn) The trap of claim 59 wherein the four insect attracting light patterns are separated by about 90 degrees.

61. The trap of claim 55 wherein the source of insect attractant light comprises at least one source of ultraviolet light.
62. The trap of claim 55 wherein the insect immobilization surface comprises an adhesive surface.
63. The trap of claim 62 wherein the adhesive surface is mounted on the planar mounting surface.
64. The trap of claim 62 wherein the adhesive surface is mounted on a portion of the housing.
65. The trap of claim 55 wherein the planar mounting surface comprises a wall surface.
66. The trap of claim 55 wherein the planar mounting surface comprises a ceiling surface.
67. The trap of claim 55 wherein the housing comprises at least one internal reflecting surface positioned such that light from the source is directed onto the planar mounting surface.
68. The trap of claim 67 wherein the reflecting surface is a planar reflecting surface.
69. The trap of claim 67 wherein the reflecting surface is a curved reflecting surface.
70. The trap of claim 55 wherein the trap further comprises an insect attractant composition.
71. The trap of claim 55 wherein the housing comprises a one piece housing surrounding the source of insect attractant light.
73. The trap of claim 55 wherein the housing comprises three openings.

- 74. (Withdrawn) The trap of claim 55 wherein the housing comprises four openings.
- 75. The trap of claim 55 wherein the light patterns are non-overlapping.
- 76. The trap of claim 55 wherein the trap shape is a regular geometric pattern.
- 77. The trap of claim 55 wherein at least one of the three light sources is an ultraviolet bulb.
- 78. The trap of claim 55 wherein the three light sources are ultraviolet bulbs having a tubular configuration.
- 79. The trap of claim 55 wherein the housing includes a triangular planar plate.

APPENDIX 3

LIST OF OFFICE ACTIONS AND AMENDMENTS/RESPONSES

- A. Final Office Action -- mailed July 16, 2003
- B. Amendment and Response to Restriction Requirement -- mailed April 21, 2003.
- C. Restriction Requirement -- mailed March 25, 2003.
- D. Amendment -- mailed December 17, 2002.
- E. Office Action -- mailed July 17, 2002

APPENDIX 4

LIST OF REFERENCES RELIED UPON BY THE EXAMINER

- A. U.S. Patent No. 4,949,501 (Larkin)

APPENDIX 5

CASES CITED IN THE BRIEF

In re Dailey and Eilers, 149 USPQ 47 (CCPA 1966)

In re Dembiczak, 175 F.3d 994; 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999)

W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983)

In re Lee, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002)

In re Rouffet, 149 F.3d 1350 (Fed. Cir. 1998)

In re Sang Su Lee, 277 F.3d 1338 (Fed. Cir. 2002)

In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991)

In re Wilson, 424 F.2d 1382; 165 USPQ 494 (CCPA 1970)